

## CLAIMS:

1. Optical disk system comprising at least one photo detector for detecting at least a part of said optical disk and in response generating detection signals and comprising at least one variable gain amplifier for amplifying detection signals and comprising at least one slicer for slicing amplified detection signals, characterized in that said optical disk system  
5 comprises at least one generator in a feedback path between said slicer and said variable gain amplifier for controlling said variable gain amplifier non-linearly.

2. Optical disk system according to claim 1, characterized in that said generator  
10 comprises a converter for converting voltages into currents.

3. Optical disk system according to claim 2, characterized in that said generator  
comprises a further converter for converting voltages into currents and comprises at least one capacitor located between both converters.

15 4. Optical disk system according to claim 3, characterized in that said photo detector comprises at least four subdetectors, with said optical disk system comprising per subdetector a variable gain amplifier, a slicer and two converters with a capacitor.

5. Circuit for amplifying and slicing detection signals originating from at least one  
20 photo detector in an optical disk system and comprising at least one variable gain amplifier for amplifying detection signals and comprising at least one slicer for slicing amplified detection signals, characterized in that said circuit comprises at least one generator in a feedback path between said slicer and said variable gain amplifier for controlling said variable gain amplifier non-linearly.

25 6. Circuit according to claim 5, characterized in that said generator comprises a converter for converting voltages into currents.

7. Circuit according to claim 6, characterized in that said generator comprises a further converter for converting voltages into currents and comprises at least one capacitor located between both converters.

5 8. Method for use in an optical disk system and comprising the steps of detecting at least a part of said optical disk via at least one photo detector and in response generating detection signals and amplifying detection signals via at least one variable gain amplifier and slicing amplified detection signals via at least one slicer, characterized in that said method comprises the step of controlling said amplifying non-linearly via at least one generator  
10 located in a feedback path between said slicer and said variable gain amplifier.

9. Method according to claim 8, characterized in that said method comprises the step of converting voltages into currents via said generator comprising a converter.

15 10. Method according to claim 9, characterized in that said method comprises the step of further converting voltages into currents via said generator comprising a further converter, with at least one capacitor being located between both converters.